Pancreatitis/Hepatitis Resulting in Alcoholic Cirrhosis

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Summarize History

- **RFA:**
  - 46yo M admitted c epigastric pain

- **PMHx:**
  - Acute pancreatitis with an enlarged fatty liver
  - Epigastric pain d/t pancreatitis

- **Pt Dx:**
  - Laennec’s cirrhosis with pancreatitis
Summarize History

- Social Hx:
  - Auto mechanic
  - Divorced with 2 children in college
  - Emotional drinker
  - Started drinking beer and whiskey in high school
Anthropometrics

- **Wt:** 68.18 kg
- **Ht:** 180.34 cm
- **BMI:** 21 kg/m$^2$ (Normal)
- **IBW (Hamwi):** 78.18 kg
- **%IBW:** 87%
- **%Wt change:** 12% (over a period of 1 ½ years)
## Biochemical – Basic

<table>
<thead>
<tr>
<th>Test</th>
<th>Range</th>
<th>Results (1)</th>
<th>Results (2)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glu</td>
<td>70-110 (mg/dL)</td>
<td>190↑</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Ca</td>
<td>8.8-10 (mg/dL)</td>
<td>8.8</td>
<td>8.4↓</td>
<td>Malabsorption</td>
</tr>
<tr>
<td>Ser alb</td>
<td>3.5-.4 8(g/dL)</td>
<td>2.9↓</td>
<td>2.3↓</td>
<td>Decreased hepatic synthesis</td>
</tr>
<tr>
<td>K</td>
<td>3.5-5.2 (mmol/dL)</td>
<td>3.4↓</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Mg</td>
<td>1.8-2.6 (mg/dL)</td>
<td>1.7↓</td>
<td>1.6↓</td>
<td>Malabsorption</td>
</tr>
<tr>
<td>P</td>
<td>2.7-4.5 (mg/dL)</td>
<td>2.6↓</td>
<td>2.3↓</td>
<td>Inadequate intake</td>
</tr>
</tbody>
</table>

↓Ca, K, Mg, & P are common among alcoholics
## Biochemical – Liver Function

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>AST</td>
<td>14-20 (units/L)</td>
<td>183 ↑</td>
<td>240 ↑</td>
<td>Acute pancreatitis</td>
</tr>
<tr>
<td>ALT</td>
<td>10-40 (units/L)</td>
<td>132 ↑</td>
<td>200 ↑</td>
<td>Hepatitis, cirrhosis, hepatic necrosis, pancreatitis</td>
</tr>
<tr>
<td>ALP</td>
<td>25-100 (units/L)</td>
<td>253 ↑</td>
<td>363 ↑</td>
<td>Cirrhosis, hepatitis</td>
</tr>
<tr>
<td>PT</td>
<td>11-13 (seconds)</td>
<td>12.2</td>
<td>15.4 ↑</td>
<td>Liver disease</td>
</tr>
<tr>
<td>TBIL</td>
<td>0.3-1.0 (mg/dL)</td>
<td>3.2 ↑</td>
<td>4.8 ↑</td>
<td>Cirrhosis, hepatitis</td>
</tr>
<tr>
<td>Amylase</td>
<td>25-125 (units/L)</td>
<td>485 ↑</td>
<td>685 ↑</td>
<td>Acute pancreatitis (70-90%), pancreatic duct obstruction</td>
</tr>
</tbody>
</table>
**Biochemical – CBC**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Hgb</td>
<td>M: 13.5-17.5 (g/dL)</td>
<td>12 ↓</td>
<td>Anemia, malnutrition</td>
</tr>
<tr>
<td>Hct</td>
<td>41-53(%)</td>
<td>38 ↓</td>
<td>Anemia, malnutrition/dietary deficiency</td>
</tr>
<tr>
<td>MCV</td>
<td>80-100 (fl)</td>
<td>110 ↑</td>
<td>Pernicious anemia, liver disease</td>
</tr>
</tbody>
</table>

CBC test was not administered on first visit.
Clinical

- **HPI**
  - **Dx:** Acute pancreatitis c enlarged fatty liver

- **Medication post 1st admission:**
  - Pancrease (lipancreatin) x 3d
    - Increased digestion of fats, carbohydrates, proteins in GI tract
  - Potassium chloride (Slow K)x 3d
    - Replacement, prevent deficiency, gastric secretion, renal function, carbohydrate metabolism
  - Avoid taking pancreatin with antacids
  - Well balanced diet, ample protein
  - Multi vitamin and mineral supplement
  - **Avoid alcohol**
Clinical

- **Post 1st admission**
  - Experienced DTs (delirium tremens), started drinking again
  - Depression
  - Stomach pains

- **2nd admission**
  - Dx: Ulcer
  - Diet: Liberal bland diet
Clinical

- **Post 2\textsuperscript{nd} admission**
  - Continued drinking
  - Recurring epigastric pains

- **3\textsuperscript{rd} admission**
  - Blood test
  - Dx: Laennec’s cirrhosis c pancreatitis
Laennec’s cirrhosis with pancreatitis

- Also called alcoholic cirrhosis
- Alcohol causes liver inflammation and scaring
- Caused by long term alcohol use
- Early disease:
  - Enlarges, firms, and hardens
- End stage disease:
  - Smaller and nodular
## Usual Dietary Intake

<table>
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<tr>
<th>Time</th>
<th>Food/Beverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>14oz Coffee&lt;br&gt;2 tbsp Cream&lt;br&gt;2 tsp Sugar&lt;br&gt;1 Danish pastry with fruit or breakfast sandwich</td>
</tr>
<tr>
<td>Afternoon</td>
<td>12 oz Coke&lt;br&gt;Hamburger or fast food sandwich&lt;br&gt;Medium French Fries&lt;br&gt;1 tbsp Ketchup&lt;br&gt;12 oz Coke throughout the day</td>
</tr>
<tr>
<td>Night</td>
<td>12 oz Beer&lt;br&gt;Plate lunch type of meal&lt;br&gt;2 scoops of rice, mac salad, chicken katsu or teri beef&lt;br&gt;3-4 12 oz Beer</td>
</tr>
</tbody>
</table>

Total kcal: 3181  
PRO: 85 g  
CHO: 360g  
FAT: 102.9g
MyPlate: Usual Dietary Intake

- **Milk Intake**: 0 cup equivalent
  - Milk Recommendation: 3 cup equivalent

- **Meat and Beans Intake**: 9.1 oz equivalent
  - Meat and Beans Recommendation: 6 oz equivalent

- **Vegetables Intake**: 1.7 cup equivalent
  - Vegetables Recommendation: 3 cup equivalent

- **Fruits Intake**: 0.2 cup equivalent
  - Fruits Recommendation: 2 cup equivalent

- **Grains Intake**: 8.3 oz equivalent
  - Grains Recommendation: 7 oz equivalent
# 24-Hour Recall

<table>
<thead>
<tr>
<th>Time</th>
<th>Food/Beverage</th>
</tr>
</thead>
</table>
| Morning | 14 oz Decaf Coffee  
2 tbsp Cream substitute  
2 tsp Sugar  
Biscuit Sandwich with bacon, egg, and cheese |
| Afternoon| 12 oz Coke  
Hamburger  
Medium French Fries  
12 oz Bottled Water |
| Night  | 3 oz Steak  
½ c Rice  
½ c Canned Corn  
6 12 oz Beers |

Kcal: 2909  
Pro: 82g  
CHO: 349g  
fat: 78.5g
MyPlate: 24-Hour Recall

- Milk Intake: 0.4 cup equivalent
  - Milk Recommendation: 3 cup equivalent
- Meat and Beans Intake: 5.3 oz equivalent
  - Meat and Beans Recommendation: 6 oz equivalent
- Vegetables Intake: 2.4 cup equivalent
  - Vegetables Recommendation: 3 cup equivalent
- Fruits Intake: 0 cup equivalent
  - Fruits Recommendation: 2 cup equivalent
- Grains Intake: 5.5 oz equivalent
  - Grains Recommendation: 7 oz equivalent
Energy Requirements

- **Harris-Benedict Equation**
  \[ 66.47 + 13.75 \times 68.18 \text{kg} + 5 \times 180.34 \text{cm} - 6.77 \times 46 \text{yrs} = 1594 \text{ kcal/day} \]

- **Physical Activity & Stress Factor:**
  \[ \text{HBE} \times 1.4 \text{ (AF)} \times 1.3 \text{ (SF)} = 2902 \text{ kcal/d} \]

- **Protein Requirement**
  - Cirrhosis: 1.0-1.2 g/kg
  - 68-82 g/kg
Fluid Requirement

- Body Weight Method
  - 1110 mL

- Energy Method
  - 2902 mL
Nutrition Diagnosis

- Excessive alcohol intake r/t harmful beliefs/ attitude toward alcoholic beverages AEB reported intakes of EtOH and liver/pancreatic disease.

Alternative Nutritional Diagnosis

- Undesirable food choices r/t perception that lack of resources (time and finances) prevent selection of appropriate food choices consistent with recommendations AEB inadequate vitamin/mineral consistency and diet history inconsistent with dietary guidelines.
Plan Management

- **Nutrition Intervention:**
  - Hold off oral and enteral feeding
  - Support with IV fluids
  - Start tube feed if oral nutrition cannot be initiated in 5-7 days
- **Oral nutrition:**
  - Easily digestible foods
  - Low fat, high protein
  - 6 small meals – Liberal bland diet
  - Increased calories
Plan Management

- **Communication:**
  - Nutrition education
  - Planned diet for his condition
    - Smaller frequent meals; ↑PRO ↓FAT
  - Avoid alcohol
  - Refer pt to specialist for EtOH and depression

- **Monitor**
  - Follow up in 1 month
  - Monitor LFT
    - AST, ALT, ALP, PT, TBIL, Amylase
References